

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

10. (currently amended) A high voltage semiconductor device comprising:
a semiconductor substrate, the semiconductor substrate including a
plurality of device structures thereon; and
an interconnect on the semiconductor substrate, the interconnect
comprising at least one slot provided in the semiconductor substrate and a plurality of metals at
least one metal within the at least one slot, wherein the plurality of metals comprises three
metals, wherein the first and second metals fill the slot and the third metal provides an
interconnect layer, the at least one metal being of sufficient thickness to carry a high current,
wherein the at least one slot is oxidized everywhere except at the bottom of the slot where the
interconnect forms a ground strap.

✓ Please cancel claims 11 and 12.

✓ 11. (cancelled)

✓ 12. (cancelled)

✓ 13. (currently amended) The semiconductor device of claim ~~12~~ 10 wherein the plurality of metals comprises three metals, wherein the first and second metals fill the slot and the third metal provides an interconnect layer.

14. (original) The semiconductor device of claim 13 wherein the ground strap comprises an ideal short to ground.

15. (original) The semiconductor device of claim 14 wherein the ground strap provides for isolation between components.

16. (currently amended) A high voltage interconnect on a semiconductor substrate comprising:

at least one slot provided in the semiconductor substrate; and

~~at least one a plurality of metals~~ within the slot, ~~the at least one metal being of sufficient thickness to carry a high current;~~ wherein the plurality of metals comprises three metals, wherein the first and second metals fill the slot and the third metal provides an interconnect layer, wherein the at least one slot is oxidized everywhere except at the bottom of the slot, and the interconnect forms a very low resistance ground strap.

✓ Please cancel claims 17-19.

✓ 17. (cancelled)

18. (cancelled)

19. (cancelled)

20. (original) The interconnect of claim 16 wherein the ground strap comprises an ideal short to ground.

21. (original) The interconnect of claim 16 wherein the ground strap provides for isolation between components.

Suppl.

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Notice of Allowability	Application No.	Applicant(s)	
	10/034,279	HUSHER, JOHN DURBIN	
	Examiner	Art Unit	
	David Nhu	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/6/04.
2. ☒ The allowed claim(s) is/are 10,13-16,20 and 21.
3. ☒ The drawings filed on 28 December 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
 Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

David Nhu

EXAMINER'S AMENDMENT

1. Applicant's election of claims 10-21 is acknowledged. Because Applicant did not distinctly and specifically point out the supposed error in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). **Applicant have the right to file a divisional application covering the subject matter of the non-elected claims 1-9.**

The traversal is on the ground(s) that see the election paper. This is not found persuasive because the fields of search for method' and device claims are NOT coextensive and the determinations of patentability of method and device claims are different, that is process limitations and device limitations are given weight differently in determining the patentability of the claimed inventions. Also, the strategies for doing text searching of the device claims and method claims are different. Thus, separate searches are required.

The requirement is still deemed proper and is therefore made FINAL.

2. An examiner's amendment to the record appears below. Should the change and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in an interview with Attorney, Joseph A. Sawyer, Jr., on 9/27/04.

Cancel claims 1-9, 11-12, 17-19.

REASONS FOR ALLOWANCE

3. Claims 10, 13-16, 20-21 are allowed.

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4. The following is an examiner's statement of reasons for allowance: None of the references of record teaches or suggests as cited in claims 10, 16: a plurality of metals within the slot, wherein the plurality of metals comprises three metals, wherein the first and second metals fill the slot and the third metal provides an interconnect layer, wherein the at least one slot is oxidized everywhere except at the bottom of the slot where the interconnect forms a ground strap (as cited in claim 10); an interconnect on the semiconductor substrate, the interconnect comprising at least one slot provided in the semiconductor substrate and a plurality of metals within the at least one slot, wherein the plurality of metals comprises three metals, wherein the first and second metals fill the slot and the third metal provides an interconnect layer, wherein the at least one slot is oxidized everywhere except at the bottom of the slot, and the interconnect forms a very low resistance ground strap (as cited in claim 16).

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CONCLUSION

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Yamada (6,008,127): Semiconductor Device Having Etching Stopper Layer Formed by Oxidation and Method of Fabricating the same.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Nhu, (571)272-1792. The examiner can normally be reached on Monday-Friday from 7:30 AM to 5:00 PM.

The examiner's supervisor, David Nelms can be reached on (571)272-1787.

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The fax phone number for the organization where this application or proceeding is assigned is (571)273-1792.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

David Nhu



December 22, 2004

DAVID NHU
PRIMARY EXAMINER